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BEFORE THE ARIZONA CORPORATION COMMISSION

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JEFF HATCH-MILLER, CHAIRMAN
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KRISTIN K. MAYES
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF PALO VERDE UTILITIES COMPANY FOR AN EXTENSION OF ITS EXISTING CERTIFICATE OF CONVENIENCE AND NECESSITY.	Docket No. SW-03575A-05-0307
IN THE MATTER OF THE APPLICATION OF SANTA CRUZ WATER COMPANY FOR AN EXTENSION OF ITS EXISTING CERTIFICATE OF CONVENIENCE AND NECESSITY.	Docket No. W-03576A-05-0307

NOTICE OF FILING OF
IN COMPLIANCE WITH DECISION NO. 68448

As requested by Decision No. 68448, Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C. (collectively "Global Utilities") file the required Aquifer Protection Permit. Decision No. 68448 also required the Global Utilities to submit a Surface Water Discharge Permit. However, the Global Utilities' plans have changed so that the Surface Water Discharge Permit is no longer required. In particular, the Global Utilities entered into an unprecedented agreement with the Ak-Chin Indian Community. Under this agreement, the relevant discharges are banned. A copy of this agreement is attached. Because there will be no discharges, a Surface Water Discharge Permit is not required.

Arizona Corporation Commission
DOCKETED
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DOCKETED BY

RESPECTFULLY submitted this 2nd day of January 2007.

ROSHKA DEWULF & PATTEN, PLC

By _____

Michael W. Patten
Timothy J. Sabo
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Attorneys for Palo Verde Utilities Company nd
Santa Cruz Water Company

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Original + 15 copies of the foregoing filed this 2nd day of January 2007, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, Arizona 85007

Copies of the foregoing hand-delivered/mailed this 2nd day of January 2007, to:

Dwight D. Nodes, Esq.
Administrative Law Judge
Hearing Division
Arizona Corporation Commission
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Phoenix, Arizona 85007

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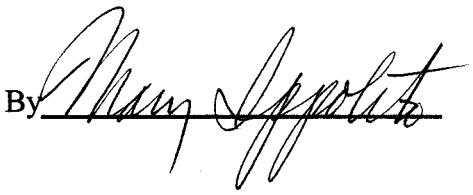
By 

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GLOBAL WATER

23 May 2006

Delia M. Carlyle, Chairman
Ak-Chin Indian Community
Community Government
42507 W. Peters & Nall Road
Maricopa, AZ 85239

Re: Letter of Understanding
Palo Verde Utilities Company (PVUC) Consolidated 208 Regional Water Quality Management Plan Amendment

Dear Chairman Carlyle:

Palo Verde Utilities Company (PVUC) and its parent Global Water Resources (Global) have been responding to significant growth pressure in the areas around the Cities of Maricopa and Casa Grande, and the Ak-Chin Indian Community (Community). For Global, the pressure to stay ahead of the growth in terms of infrastructure is intense; the consequences of not being ahead in planning, however, are dire.

It was under these circumstances that Global in 2004 began preparing the regional plan for water, wastewater and reclaimed water services. This plan came to be known as the "Consolidated 208 Plan" and provides a responsible, responsive and flexible approach to environmental sustainability in the region. Included in this Consolidated 208 Plan was the provision for re-use, recharge and discharges to washes in the area. Any discharges to Waters of the United States would be permitted by ADEQ under the Arizona Pollutant Discharge Elimination System (AzPDES) program.

Notwithstanding the operational benefits of an "emergency valve" to allow for the delivery of Class A+ Reclaimed Water to Waters of the US in times of prolonged decline in re-use consumption, or the fact that the reclaimed water proposed to be discharged can be scientifically demonstrated to be of better and more consistent quality than storm water, the Community has indicated that the cultural and environmental aspects of the washes simply outweigh any potential operational benefit afforded PVUC.

Accordingly, Global and PVUC are willing to remove the development of proposed new AzPDES discharge points upstream of the Ak-Chin Community in the Vekol, Santa Rosa, Smith and Santa Cruz washes, including their tributaries and the Santa Rosa Canal that could result in an impact or flow through the sovereign land of the Ak-Chin Community. It is understood and acknowledged that this decision comes with costs with respect to the deployment of recharge and re-use infrastructure and associated operating costs.

Recognizing the importance of the development of a continued working relationship between Global and the Community, the Community's commitment to protect and preserve its cultural, environmental and natural resources, and Global's objective of responding to growth in the area in a planned and managed manner, Global and PVUC agree to:

21410 North 19th Avenue, Suite 201, Phoenix, Arizona 85027
Phn 623 580 9600
Fax 623 580 9639
gwresources.com

1. Amend and re-submit to CAAG the Consolidated 208 Plan and stipulate on the record during the May 24, 2006 Pinal County Board of Supervisor's hearing on case IUP-001-06 to withdraw the upstream discharge points that include the Vekol, Santa Rosa, Smith and Santa Cruz washes, including their tributaries and the Santa Rosa Canal that could result in an impact or flow through the sovereign land of the Ak-Chin Indian Community;

2. Deploy the necessary re-use and recharge infrastructure to preclude a requirement for such discharges to the Waters of the US;

3. Work with the Community to preserve aquifer water quality for the region and provide monitoring and compliance data as agreed to by Global and the Community such data as it relates to recharge activity and water quality and provide for the opportunity to review applications, reports and other relevant regulatory filings;

4. Consult with the Community in connection with Global's water, wastewater, and reclaimed water regional planning activities; and

5. Reiterate the offer to the Community to assist in providing water, wastewater and reclaimed water services as deemed appropriate and agreed to by Global and the Community

The Community:

1. Recognizes the benefit of Global's re-use and recharge initiatives and offers no objections to the Consolidated 208 Plan (as amended pursuant to this document) including those permits or authorities required to implement the Plan (recharge/re-use permits, aquifer protection permits, underground storage facility permits, recovery permits, industrial use permits and other applicable permits); and

2. Recognizes the benefit of Global's re-use and recharge initiatives and offers no objections to the PVUC Industrial Use Permit application presently under review by Pinal County

This document provides the framework that allows for the conservation of water resources in the area, the development of the area under a sustainable and managed model and the protection of the area's cultural heritage. As such, it represents a great starting point for further and future cooperation.

Sincerely,

GLOBAL WATER RESOURCES
PALO VERDE UTILITIES COMPANY

Trevor Hill, P.Eng.
President & CEO

AK-CHIN INDIAN COMMUNITY COUNCIL

Delia M. Carlyle
Chairman, Ak-Chin Indian Community

cc: Ak-Chin Indian Community Council Members
William R. Rhodes, Governor, Gila River Indian Community (GRIC)
Vivian Juan-Saunders, Chairwoman, Tohono O'odham Nation (TON)
Joni Ramos, President, Salt River Pima-Maricopa Indian Community (SRPMIC)
Raphael Bear, President, Ft. McDowell Yavapai Nation
Janet Napolitano, Governor, State of Arizona
Congressman Raul M. Grijalva, 3rd District, Arizona
Vera Phillips, Commission of Indian Affairs
John Lewis, Executive Director, Inter Tribal Council of Arizona, Inc.
Wayne Nastri, Regional Administrator, U.S. Environmental Protection Agency (U.S. EPA), Region IX
Kristin Gullat, Manager, Tribal Office, Water Division, U.S. EPA, Region IX
Clancy Tenley, Manager, Tribal Programs Office, Communities & Ecosystems Division, U.S. EPA, Region IX
Loretta Vanegas, Project Officer, Water Division, U.S. EPA, Region IX
Doug Eberhardt, NPDES Manager, U.S. EPA, Region IX
Dave W. Smith, TMDL Coordinator, U.S. EPA, Region IX
Amy Heuslin, Bureau of Indian Affairs (BIA)
Cecilia Martinez, Acting Superintendent, Pima Agency, BIA
Chairman and Commissioners, Arizona Corporation Commission
Stephen A. Owens, Director, Arizona Department of Environmental Quality (ADEQ)
Herb Guenther, Director, Arizona Department of Water Resources
Joan Card, Division Director, Water Quality, ADEQ
Linda Taunt, Deputy Director, Water Quality, ADEQ
Dave Snider, Supervisor, Pinal County, District 5
Kelly Anderson, Mayor, City of Maricopa
Charles Walton, Mayor, City of Casa Grande
James Thompson, City Manager, City of Casa Grande
Rick Rios, City Manager, City of Maricopa
Terry Doolittle, County Manager, Pinal County
Maxine Leather, Executive Director, Central Arizona Association of Governments
Ak-Chin Indian Community Task Force Committee

Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Stephen A. Owens
Director

December 19, 2006

Graham Symmonds
21410 N 19th Avenue, Suite 201
Phoenix, AZ 85027
(623)580-9600

Re: Palo Verde Utilities Company – Campus 2 Water Reclamation Facility
Signed Aquifer Protection Permit (APP) Inventory No. 105668, LTF No. 37531

Dear Mr. Symmonds,

Enclosed is a signed copy of an Individual APP with Fact Sheet for the above referenced facility. The permit conditions shall apply from December 14, 2006 which is the date of the Water Quality Division Director's signature, and shall be valid for the life of the facility. Thank you for your cooperation in protecting the water quality of the State of Arizona.

If you have any questions about this permit or need further assistance, please contact me at (800) 234-5677 ext. 771-4498 or at (602) 771-4498. I can also be reached by email at rm4@azdeq.gov.

Sincerely,
Bob Manley
Bob Manley, Project Manager
APP & Reuse Unit
Groundwater Section, Water Quality Division

2 Enclosures: Signed Final Permit and Fact Sheet

cc: Asif Majeed, Manager, APP & Reuse Unit (Letter Only)
Lynne Dekarske, Administrative Assistant III, Groundwater Section
Matthew Hodge, Manager, Data Unit, Water Quality Compliance Section
Robert Casey, Manager, Enforcement Unit, Water Quality Compliance Section
John Gibbons, Manager, Water Quality Compliance Section, Field Services Unit
Bill Hare, Inspector, Water Quality Compliance Section
Pinal County Health Department
Robin Bain, Global Water
Deanne Kincade, McBride Engineering Solutions, Inc.
C. Nancy LaMascus, HydroSystems, Inc.
Stella Murillo, Recharge Coordinator, ADWR
Drew Swieczkowski, Surfacewater and Recharge Section, ADWR
Sujana Attaluri, Technical Support Unit, Groundwater Section (Letter Only)
Jean Black, Technical Support Unit, Groundwater Section (Letter Only)
Marcy Mullins, Reuse Coordinator, APP & Reuse Unit (Letter Only)
Marcia Colquitt, Biosolids Coordinator

WRR06: 0759

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-105668
PLACE ID 108126, LTF 37531

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, Palo Verde Utilities Company, L.L.C. is hereby authorized to operate the Palo Verde Utilities Company – Campus 2 Water Reclamation Facility located at the southwest corner of Peters & Nall Road and Green Road, north of the Town of Maricopa, in Pinal County, Arizona, over groundwater of the Maricopa-Stanfield Groundwater Basin, within the Pinal Active Management Area (AMA) in Township 5 S, Range 3 E, Section 17 of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable points of compliance (POCs) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name:	Palo Verde Utilities Company – Campus 2 Water Reclamation Facility (WRF)
Facility Address:	Southwest corner of Peters & Nall Road and Green Road Maricopa, Arizona Pinal County
Permittee:	Palo Verde Utilities Company, L.L.C.
Permittee Address:	21410 N 19th Ave., Suite 201 Phoenix, Arizona 85027
Facility Contact:	Graham Symmonds
Emergency Phone No.:	(623) 580-9600
Latitude/Longitude:	32° 59' 54.1" N / 112° 4' 1.1" W
Legal Description:	Township 5 S, Range 3 E, Section 17, of the Gila and Salt River Baseline and Meridian

1.2 AUTHORIZING SIGNATURE

Joan Card

Joan Card, Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 14th day of December, 2006

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]

2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]

The Palo Verde Utilities Company – Campus 2 WRF will have the capacity to collect and treat a maximum average monthly flow of 9.0 million gallons per day (MGD). The WRF will be constructed in five phases, with a full build-out capacity of 13.0 MGD. Only Phases I through IV will be permitted in this permit.

The WRF process consists of headworks with screens and grit removal, sequencing batch reactors, equalization basins, traveling bridge filters, ultraviolet (UV) disinfection system, aerobic sludge digesters, sludge belt press thickeners, and an effluent pump station. All treatment units upstream of the filters will be covered with concrete or aluminum covers and air scrubbers will be provided for odor control. All pumps, blowers, and electrical equipment will be housed within buildings for noise control. The entire WRF site will be surrounded by a chain link fence and/or a masonry wall, for aesthetic control. The WRF meets the required setback of 350 feet. All the sludge, including screenings, grit, and scum, will be hauled off-site for disposal in accordance with State and Federal regulations.

The WRF will produce reclaimed water meeting Class A+ Reclaimed Water Standards (A.A.C. R18-11, Article 3) that may be delivered for beneficial use under a valid reclaimed water permit under A.A.C. R18-9 Article 7. Reuse will be the primary method of disposal. Recharge via vadose zone recharge wells (VZ) and aquifer injection recharge wells (INJ) will also be used as back-up to accommodate seasonal variations in reuse demand. Two recharge sites connected via pipeline will be used due to limited recharge capacity at the WRF site. One recharge site is adjacent to the WRF. The other recharge site is located at the Global Water – Terrazzo Water Distribution Center (WDC). The WDC (groundwater storage and water distribution facility) is located approximately five miles south-southwest of the WRF.

Depth to groundwater at the WRF site is approximately 130 feet, and the direction of groundwater flow is from northeast to southwest. The depth to groundwater at the WDC site is approximately 550 feet, and the groundwater flow direction is to the south.

Upon completion of all phases of construction, the permittee may submit an application for a permit amendment to delete the monitoring tables that are no longer applicable.

All industrial hookups and other non-residential hookups to the treatment system shall conform to Section 307 of the Federal Water Pollution Control Act and shall be authorized according to the National Pretreatment Program, or as otherwise approved by federal, state or local regulations.

The site includes the following permitted discharging facilities:

Facility	Latitude	Longitude
WRF Site		
Campus 2 WRF	32° 59' 54.1" N	112° 4' 1.1" W
Storm water retention basin[1]	32° 59' 55.0" N	112° 4' 0.0" W
C2VZ-1	32° 59' 59.40" N	112° 4' 3.94" W
C2VZ-2	32° 59' 56.39" N	112° 4' 3.94" W
C2VZ-3	32° 59' 53.37" N	112° 4' 3.94" W
C2VZ-4	32° 59' 50.35" N	112° 4' 3.94" W
C2VZ-5	32° 59' 53.37" N	112° 3' 53.68" W
C2VZ-6	32° 59' 50.35" N	112° 3' 53.68" W

[1] In addition to storm water, the retention basins contain water back-flushed from the recharge wells. The back-flushed water may contain chlorine byproducts and coagulants.

Facility	Latitude	Longitude
C2VZ-7	32° 59' 47.33" N	112° 3' 53.68" W
C2VZ-8	32° 59' 47.33" N	112° 3' 57.18" W
WDC Site		
Terrazzo WDC (Recharge site)	32° 56' 26.4" N	112° 6' 2.4" W
Storm water retention basin #1	32° 56' 25.1" N	112° 6' 7.2" W
Storm water retention basin #2	32° 56' 30.7" N	112° 6' 14.9" W
TVZ-1	32° 56' 24.54" N	112° 6' 5.89" W
TVZ-2	32° 56' 29.15" N	112° 6' 5.89" W
TVZ-3	32° 56' 25.79" N	112° 6' 5.88" W
TVZ-4	32° 56' 29.70" N	112° 6' 10.69" W
TVZ-5	32° 56' 25.43" N	112° 6' 7.17" W
TVZ-6	32° 56' 30.04" N	112° 6' 5.88" W
TVZ-7	32° 56' 26.25" N	112° 6' 8.04" W
TVZ-8	32° 56' 30.41" N	112° 6' 15.43" W
TVZ-9	32° 56' 26.93" N	112° 6' 8.76" W
TVZ-10	32° 56' 30.41" N	112° 6' 14.21" W
TVZ-11	32° 56' 26.70" N	112° 6' 5.85" W
TVZ-12	32° 56' 30.41" N	112° 6' 13.09" W
TVZ-13	32° 56' 27.61" N	112° 6' 9.59" W
TVZ-14	32° 56' 30.41" N	112° 6' 11.54" W
TVZ-15	32° 56' 27.66" N	112° 6' 5.84" W
TVZ-16	32° 56' 30.37" N	112° 6' 10.64" W
TVZ-17	32° 56' 28.11" N	112° 6' 8.26" W
TVZ-18	32° 56' 30.37" N	112° 6' 9.43" W
TVZ-19	32° 56' 28.23" N	112° 6' 10.61" W
TVZ-20	32° 56' 30.37" N	112° 6' 8.27" W
TVZ-21	32° 56' 28.44" N	112° 6' 5.85" W
TVZ-22	32° 56' 30.37" N	112° 6' 7.01" W
TVZ-23	32° 56' 28.88" N	112° 6' 11.55" W
TINJ-1	32° 56' 26.01" N	112° 6' 5.91" W
TINJ-2	32° 56' 27.20" N	112° 6' 9.14" W
TINJ-3	32° 56' 28.10" N	112° 6' 7.53" W
TINJ-4	32° 56' 28.81" N	112° 6' 11.44" W
TINJ-5	32° 56' 29.79" N	112° 6' 8.19" W
TINJ-6	32° 56' 30.00" N	112° 6' 14.13" W
TINJ-7	32° 56' 30.24" N	112° 6' 9.94" W

Annual Registration Fee [A.R.S. § 49-242]

The Annual Registration Fee for this permit is established by A.R.S. § 49-242(E) and is payable to ADEQ each year. The design flow is 9.0 MGD.

Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee shall maintain financial capability throughout the life of the facility. The estimated dollar amount demonstrated for financial capability is $119,000. The financial capability was demonstrated through R18-9-A203, Subsections (B)(1) and (C)(5).

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The Water Reclamation Facility shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in Arizona Administrative Code R18-9-B204.

If Phases I through IV are not completed within five (5) years of the issuance of this permit, the remaining construction shall be re-evaluated using updated BADCT.

The facility shall meet the requirements for pretreatment by conducting monitoring as per R18-9-B204(B)(6)(b)(iii).

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

2.2.1 Engineering Design

The WRF was designed as per the design report prepared, stamped and signed (sealed) by Richard J Ryan, P.E., Aqua Tec, Inc., dated January 13, 2006, and subsequent sealed submittals by Brian P. McBride, P.E., McBride Engineering Solutions, Inc., that served as additions to the design report.

2.2.2 Site-specific Characteristics

Site-specific characteristics were not used to determine BADCT.

2.2.3 Pre-Operational Requirements

The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per Compliance Schedule in Section 3.0.

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the O & M manual at the WRF site at all times and shall be available upon request during inspections by ADEQ personnel.

2. The pollution control structures shall be inspected for the items listed in Section 4.0, Table III.

3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and material(s) used shall be documented on the Self-Monitoring Report Form submitted quarterly to the ADEQ Water Quality Compliance Section.

2.2.5 Wastewater Treatment Plant Classification A.A.C. R18-9-703(C)(2)(a), A.A.C. R18-11-303 THROUGH 307]

The WRF will produce reclaimed water that meets Class A+ Reclaimed Water Quality Standards and can be used for any allowable use in that class under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to operate the WRF with a maximum average annual flow of 9.0 MGD. Discharge monitoring during Phases I through IV of construction will be conducted under Tables IA-1 through IA-4. The facility shall only monitor under the appropriate Tables commensurate with phases already constructed. Upon construction of each phase, the facility shall discontinue monitoring required in the previous phase(s). No monitoring is required for any phase that is not yet constructed. Treated effluent recharged to groundwater shall be monitored under Table IA-5.

2. The permittee shall notify all users that the materials authorized to be disposed of through the WRF are typical household sewage and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.

3. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of BADCT pollutant control technologies including liner failure[2], uncontrollable leakage, overtopping (e.g., exceeding the maximum storage capacity, defined as a fluid level exceeding the crest elevation of a permitted impoundment), of basins, lagoons, impoundments or sludge drying beds, berm breaches, accidental spills, or other unauthorized discharges.

4. Specific discharge limitations are listed in Section 4.0, Tables IA-1 through IA-5.

2.4 Point of Compliance (POC) [A.R.S. § 49-244]

The Points of Compliance are established by the following designated locations:

POC #	POC Name	Descriptive Location	Latitude	Longitude
1	WRF-MW-1 (ADWR No. 55-902898)	Well installed at the southwest corner of the WRF site	32° 59' 47.3" N	112° 4' 3.94" W
2	WDC-MW-1 (ADWR No. 55-904018)	Well installed at the northeast corner of the WDC site	32° 56' 30.2" N	112° 6' 5.98" W
3	WDC-MW-2	Conceptual location near the southeast corner of the WDC site	32° 56' 29.9" N	112° 6' 8.3" W

WRF Site

Groundwater monitoring is required at POC #1. This well is downgradient of the WRF and the adjacent recharge site. WRF-MW-1 is a 4-inch diameter PVC cased well completed to a depth of 200 feet and screened from 67 feet to 186 feet bls.

[2]Liner failure in a single-lined impoundment is any condition that would result in leakage exceeding 550 gallons per day per acre.

WDC Site

Groundwater monitoring is required at POC #2. WDC-MW-1 is a 4-inch diameter PVC cased well completed to a depth of 610 feet and screened from 530 feet to 600 feet bls. Although it is currently upgradient of the recharge wells, it is within the DIA created by recharge from the facility, and it will be downgradient during recharge due to groundwater mounding. A monitor well is not required to be installed at POC #3 except as a contingency action. If a monitor well is required to be installed at POC #3 in the future, its design will be similar to that of WDC-MW-1.

The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and chain of custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and EPA 40 CFR Part 136 for guidance in this regard. Copies of laboratory analyses and chain of custody forms shall be maintained at the permitted facility. Upon request these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Discharge Monitoring

The permittee shall monitor the wastewater according to Section 4.0, Tables IA-1 through IA-5. At the WRF site, a representative sample of the wastewater shall be collected at the point of discharge from the effluent pump station. At the WDC site, the discharge flow rate shall be measured at the WDC end of the pipeline from the WRF to the WDC, prior to discharge to the recharge wells.

2.5.1.1 Reclaimed Water Monitoring

The permittee shall monitor the parameters listed under Table IB in addition to the routine discharge monitoring parameters listed in Tables IA-1 through IA-5.

2.5.2 Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.0, Table III.

a. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented on the Self-Monitoring Report Form (SMRF) submitted quarterly to the ADEQ Water Quality Compliance. If none of the conditions occur, the report shall say "no event" for a particular reporting period. If the facility is not in operation, the permittee shall indicate this on the SMRF.

b. The permittee shall submit data required in Section 4.0, Table III regardless of the operating status of the facility unless otherwise approved by the Department or allowed in this permit.

2.5.2.1 Fissure and Subsidence Inspections

The permittee shall also inspect the facility for fissures or signs of subsidence that may impact the on-site facilities. Visual inspections shall be performed by personnel trained in identification of surficial features of earth fissures and subsidence. Inspections shall be made in the buffer zone surrounding the wastewater recharge sites to a distance of 300 feet from the recharge sites, where practicable. Earth fissure monitoring is required

monthly. If the surficial features that could indicate the presence of earth fissures are observed, the observations will be confirmed by a third party professional engineer or geologist. If the third party inspection confirms the possibility that the surficial features indicate a fissure, the features will be documented with sketches, maps and photographs as appropriate, indicating the nature of the feature, dimensions, and orientation. Documentation will also include any incremental changes in a feature previously documented. All this information shall be submitted in a report to ADEQ, within 60 days of the confirmation of the presence of fissures. The report shall consist of observations and interpretations concerning the potential effects of pollutant contamination on the environment and public health.

2.5.3 Groundwater Monitoring and Sampling Protocols

The permittee shall monitor the groundwater according to Section 4.0, Tables IIA and IIB.

Static water levels shall be measured and recorded prior to sampling. Wells shall be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80% of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as "dry" for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the Self- Monitoring Report Form (SMRF).

2.5.4 Surface Water Monitoring and Sampling Protocols

Routine surface water monitoring is not required under the terms of this permit.

2.5.5 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state approved methods. If no state approved method exists, then any appropriate EPA approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona State certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Ave.
Phoenix, AZ 85007
Phone: (602) 364-0720

2.5.6 Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the ADEQ Groundwater Section for approval prior to installation and the permit shall be amended to include any new points.

2.6 Contingency Plan Requirements

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Requirements

At least one copy of the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any alert level (AL) exceedance, or violation of an aquifer quality limit (AQL), discharge limit (DL), or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

2.6.2 Exceeding of Alert Levels/Performance Levels

2.6.2.1 Exceeding of Performance Levels (PL) Set for Operational Conditions

1. If an operational PL set in Section 4.0, Table III has been exceeded the permittee shall:

   a. Notify the ADEQ Water Quality Compliance Section within five (5) days of becoming aware of an exceedance of any permit condition in Table III.

   b. Submit a written report within thirty (30) days after becoming aware of an exceedance of a permit condition. The report shall document all of the following:

      (1) A description of the exceedance and its cause;

      (2) The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;

      (3) Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;

      (4) Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard; and

      (5) Any malfunction or failure of pollution control devices or other equipment or process.

2. The facility is no longer on alert status once the operational indicator no longer indicates that a PL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2 Exceeding of Alert Levels (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.0, Tables IA-1 through IA-5 has been exceeded, the permittee shall immediately investigate to determine the cause of the exceedance. The investigation shall include the following:

   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance.

   b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;

   c. Pretreatment source control for industrial pollutants.

2. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.

3. Within thirty (30) days of an AL exceedance, the permittee shall submit the laboratory results to the ADEQ Water Quality Compliance Section, Enforcement Unit, along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.

4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1. Exceeding Permit Flow Limit

1. If the AL for average monthly flow in Section 4.0, Table IA-1 through IA-5 is exceeded, the permittee shall submit an application for an APP amendment to expand the WRF or submit a report detailing the reasons that an expansion is not necessary.

2. Acceptance of the report instead of an application for expansion requires ADEQ approval.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

Not established at time of permit issuance.

2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

1. If an AL for a pollutant set in Section 4.0, Table IIB has been exceeded, the permittee may conduct verification sampling within 5 days of becoming aware of an AL being exceeded. The permittee may use

results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.

2. If verification sampling confirms the AL being exceeded or if the permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring to Daily', 'Weekly', and 'Monthly' for constituents that have a permit monitoring frequency of 'Weekly', 'Monthly', and 'Quarterly', 'Semi-Annual' or 'Annual' respectively. In addition, the permittee shall immediately initiate an investigation of the cause of the AL being exceeded, including inspection of all discharging units and all related pollution control devices, review of any operational and maintenance practices that might have resulted in an unexpected discharge, and hydrologic review of groundwater conditions including upgradient water quality.

3. The permittee shall initiate actions identified in the approved contingency plan referenced in Part 5.0 and specific contingency measures identified in Part 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Section, that although an AL is exceeded, pollutants are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency for approval in writing by the Groundwater Section.

4. Within thirty (30) days after confirmation of an AL being exceeded, the permittee shall submit the laboratory results to the Water Quality Compliance Section, Data Unit along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.

5. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

6. The increased monitoring required as a result of ALs being exceeded may be reduced to Section 4.0, Table IIB frequencies, if the results of four sequential sampling events demonstrate that no parameters exceed the AL.

2.6.2.3.3 Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards

Not established at time of issuance.

2.6.3 Discharge Limit (DL) Violations

1. If a DL set in Section 4.0, Tables IA-1 through IA-5 and Table IB has been violated, the permittee shall immediately investigate to determine the cause of the violation. The investigation shall include the following:

   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;

b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;

c. Sampling of individual waste streams composing the wastewater for the parameters in violation.

The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.

2. The permittee shall comply with the freeboard requirements as specified in Section 4.0, Table III (Facility Inspections) to prevent the overtopping of an impoundment. If an impoundment is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.

3. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.4 Aquifer Quality Limit (AQL) Violation

1. If an AQL set in Section 4.0, Table IIB has been exceeded, the permittee may conduct verification sampling within 5 days of becoming aware of an AQL being exceeded. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.

2. If verification sampling confirms that the AQL is violated for any parameter or if the permittee opts not to perform verification sampling, then, the permittee shall increase the frequency of monitoring to 'Daily', 'Weekly', and 'Monthly' for constituents that have a permit monitoring frequency of 'Weekly', 'Monthly', and 'Quarterly', 'Semi-Annual' or 'Annual' respectively. In addition, the permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge.

The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. A verified exceedance of an AQL will be considered a violation unless the permittee demonstrates within 30 days that the exceedance was not caused or contributed to by pollutants discharged from the facility. Unless the permittee has demonstrated that the exceedance was not caused or contributed to by pollutants discharged from the facility, the permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.

3. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. § 49-201(12) and pursuant to A.R.S. § 49-241

2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(18)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the ADEQ Water Quality Field Service Unit at (602) 771-4841 within 24 hours upon discovering the discharge of hazardous material which: a) has the potential to cause an AWQS or AQL exceedance; or b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Water Quality Field Services Unit at (602) 771-4841, within 24 hours upon discovering the discharge of non-hazardous material which: a) has the potential to cause an AQL exceedance; or b) could pose an endangerment to public health or the environment.

2.6.5.4 Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the ADEQ Water Quality Field Services Unit, Mail Code 5415B-1, 1110 West Washington Street, Phoenix, Arizona, 85007, within thirty days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Section prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;

2. Soil cleanup;

3. Cleanup of affected surface waters;

4. Cleanup of affected parts of the aquifer;

5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the ADEQ Water Quality Compliance Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements [A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1 Self Monitoring Report Forms (SMRF)

1. The permittee shall complete the SMRFs provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.

2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a quarter, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.

3. The tables contained in Section 4.0 list the parameters to be monitored and the frequency for reporting results for compliance monitoring. Monitoring and analytical methods shall be recorded on the SMRFs. The permittee reserves the right to request a relaxation of the monitoring frequency for metals and volatile organic compounds if the data indicate that water quality standards are being achieved.

4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

2.7.2 Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms, or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector

2. Date and shift inspection was conducted

3. Condition of applicable facility components

4. Any damage or malfunction, and the date and time any repairs were performed

5. Documentation of sampling date and time

6. Any other information required by this permit to be entered in the log book

Monitoring records for each measurement shall comply with R18-9-A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Water Quality Compliance Section, Enforcement Unit in writing within five (5) days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation, or of an AL exceedance.

2. The permittee shall submit a written report to the Water Quality Compliance Section, Enforcement Unit within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:

   a. Identification and description of the permit condition for which there has been a violation and a description of the cause;

   b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;

   c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;

   d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard;

   e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and

   f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

The permittee shall complete the Self-Monitoring Report Form (SMRF) provided by the Department to reflect facility inspection requirements designated in Section 4.0, Table III. SMRFs shall be submitted on a quarterly basis to the ADEQ Water Quality Compliance Section along with other reports required by this permit. Facility inspection reports shall be submitted no less frequently than quarterly, regardless of operational status.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results and flow volumes as required in Table IB to any of the following in accordance with A.A.C. R18-9-703(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee;

2. Any end user who has not waived interest in receiving this information.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Section, Data Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to the following address:

Arizona Department of Environmental Quality
Water Quality Compliance Section, Enforcement Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4614

All documents required by this permit to be submitted to the Groundwater Section shall be directed to:

Arizona Department of Environmental Quality
Groundwater Section
Mail Code: 5415B-3
1110 W. Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4428

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

Monitoring conducted during quarter:	Quarterly Report due by:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Groundwater Section and Water Quality Compliance Section shall be notified within 10 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, or Emergency Telephone Number.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Water Quality Compliance Section before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility.

2. Correct the problem that caused the temporary cessation of the facility.

3. Notify ADEQ with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of

temporary cessation, the permittee shall provide written notice to the Water Quality Compliance Section of the operational status of the facility every three (3) years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]

For a facility addressed under this permit, the permittee shall give written notice of closure to the Water Quality Compliance Section of the intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Section, a Closure Plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2 Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Section indicating that the approved Closure Plan has been implemented fully and providing supporting documentation to demonstrate that clean closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of Post Closure stated in this permit:

1. Clean closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;

2. Further action is necessary to keep the facility in compliance with the Aquifer Water Quality Standards at the applicable point of compliance;

3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;

4. Remedial or mitigative measures are necessary to achieve compliance with Title 49, Ch. 2;

5. Further action is necessary to meet property use restrictions.

2.10 Post-Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Section.

In the event clean closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Section a Post-Closure Plan that addresses post-closure maintenance and monitoring actions at the facility. The Post-Closure Plan shall meet all requirements of A.R.S. §§ 49- 201(29) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the Post-Closure Plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the Post-Closure Plan.

2.10.1 Post-Closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2 Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

For each compliance schedule item listed below, the permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Groundwater Section. A copy of the cover letter must also be submitted to the Water Quality Compliance Section, Enforcement Unit.

Description	Deadline:
STATUS REPORTS	
The permittee shall submit an annual report describing the number and location of vadose zone recharge wells and/or aquifer injection recharge wells installed. The permittee shall also notify ADEQ before replacing or abandoning any wells.	Annual report to be submitted with the first quarter SMRFs.
GROUNDWATER MONITORING	
The permittee shall conduct eight (8) monthly rounds of ambient groundwater quality sampling for the parameters listed in Section 4.0, Table IIA.	Begin sampling within 30 days after permit issuance.
The permittee shall submit an Ambient Groundwater Monitoring Report, including a summary of the data collected during all eight (8) rounds of sampling. The Ambient Groundwater Monitoring Report shall include proposed ALs and AQLs for the monitoring wells. At the same time, the permittee shall also submit an application for a permit amendment to incorporate the ALs and AQLs into Table IIB.	Within one year after issuance of the permit.
The permittee shall begin sampling under Table IIB after completion of eight (8) monthly rounds of sampling under Table IIA. Sampling under Table IIA may be discontinued after sampling under Table IIB begins.	The first samples collected under Table IIB shall be collected within 30 days after the last samples collected under Table IIA.
SUBSURFACE RECHARGE	
The permittee shall recharge treated effluent in excess of reuse demand to the subsurface via aquifer injection recharge wells and vadose zone recharge wells.	Recharge operations shall not begin before eight (8) monthly rounds of ambient groundwater quality sampling have been completed.

3.0 COMPLIANCE SCHEDULE (Continued)

Description	Deadline:
PHASE II CONSTRUCTION (3.0 MGD)	
Begin construction of Phase II.	Notify ADEQ within 15 days of the commencement date of construction of Phase II.
Submit an Engineer's certificate of completion for Phase II.	Within 30 days of completion of construction and prior to commencing discharge from the WRF under Phase II.
Notify ADEQ of commencement of discharge from the WRF for Phase II.	Within 15 days of commencement of discharge under Phase II.
PHASE III CONSTRUCTION (6.0 MGD)	
Begin construction of Phase III.	Notify ADEQ within 15 days of the commencement date of construction of Phase III.
Submit an Engineer's certificate of completion for phase III.	Within 30 days of completion of construction and prior to commencing discharge from the WRF under Phase III.
Notify ADEQ of commencement of discharge from the WRF for Phase III.	Within 15 days of commencement of discharge under Phase III.
PHASE IV CONSTRUCTION (9.0 MGD)	
Begin construction of Phase IV.	Notify ADEQ within 15 days of the commencement date of construction of Phase IV.
Submit an Engineer's certificate of completion for phase IV.	Within 30 days of completion of construction and prior to commencing discharge from the WRF under Phase IV.
Notify ADEQ of commencement of discharge from the WRF for Phase IV.	Within 15 days of commencement of discharge under Phase IV.

4.0 TABLES OF MONITORING REQUIREMENTS

PHASE I (for flows 1.0 MGD or less)
WRF SITE

TABLE IA-1
ROUTINE DISCHARGE MONITORING[3]

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1	Effluent Discharge Point			32° 59' 54.5"N	112° 3' 58.1" W
Parameter	**AL[4]**	**DL[5]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Flow to Reuse: Daily	N.E.[6]	N.E.	MGD[7]	Daily[8]	Quarterly
Flow to Reuse: Monthly Average	0.95	1.0	MGD	Monthly[9]	Quarterly
Flow to Recharge: Daily	N.E.	N.E.	MGD	Daily	Quarterly
Flow to Recharge: Monthly Average	0.95	1.0	MGD	Monthly	Quarterly
Total Flow: Daily[10]	N.E.	N.E.	MGD	Daily	Quarterly
Total Flow: Average Monthly	0.95	1.0	MGD	Monthly	Quarterly
Fecal Coliform: Single sample maximum	N.E.	23	CFU or MPN[11]	Daily[12]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[13]	N.E.	Non-detect[14]	CFU or MPN	Daily	Quarterly
Total Nitrogen[15]: 5-sample rolling geometric mean	8.0	10.0	mg/l	Monthly[16]	Quarterly

[3]Monitoring under Table IA-1 is no longer required upon commencement of Phase II operation.
[4]AL = Alert Level
[5]DL = Discharge Limit
[6]N.E. = Not established = Monitoring required but no limits have been specified at time of permit issuance.
[7]MGD = Million Gallons per Day
[8]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[9]Monthly = Monthly average of daily flow values (calculated value)
[10]Total Flow is the sum of flows to Reuse and Recharge Sites
[11]CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[12]**Daily** means at least four (4) samples per week must be analyzed.
[13]**Week** means a seven-day period starting on Sunday and ending on the following Saturday.
[14]If at least four (4) of the daily samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the daily samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has **not** been met).
[15]Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[16]A 5-Month Geometric Mean of the results of the 5 most recent samples

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-1
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Metals (Total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly.	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-1
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Organic Compounds					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Benzo (a) pyrene	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.05	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) [17]	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

[17] Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

PHASE II (for flows 3.0 MGD or less)
WRF SITE

TABLE IA-2
ROUTINE DISCHARGE MONITORING[18]

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1	Effluent Discharge Point			32° 59' 54.5"N	112° 3' 58.1" W
Parameter	**AL[19]**	**DL[20]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Flow to Reuse: Daily	N.E.[21]	N.E.	MGD[22]	Daily[23]	Quarterly
Flow to Reuse: Monthly Average	2.85	3.0	MGD	Monthly[24]	Quarterly
Flow to Recharge: Daily	N.E.	N.E.	MGD	Daily	Quarterly
Flow to Recharge: Monthly Average	2.85	3.0	MGD	Monthly	Quarterly
Total Flow: Daily[25]	N.E.	N.E.	MGD	Daily	Quarterly
Total Flow: Average Monthly	2.85	3.0	MGD	Monthly	Quarterly
Fecal Coliform: Single sample maximum	N.E.	23	CFU or MPN[26]	Daily[27]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[28]	N.E.	Non-detect[29]	CFU or MPN	Daily	Quarterly
Total Nitrogen[30]: 5-sample rolling geometric mean	8.0	10.0	mg/l	Monthly[31]	Quarterly

[18]Monitoring under Table IA-2 is no longer required upon commencement of Phase III operation.
[19]AL = Alert Level
[20]DL = Discharge Limit
[21]N.E. = Not established = Monitoring required but no limits have been specified at time of permit issuance.
[22]MGD = Million Gallons per Day
[23]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[24]Monthly = Monthly average of daily flow values (calculated value)
[25]Total Flow is the sum of flows to Reuse and Recharge Sites
[26]CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[27]**Daily** means at least four (4) samples per week must be analyzed.
[28]**Week** means a seven-day period starting on Sunday and ending on the following Saturday.
[29]If at least four (4) of the daily samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the daily samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has **not** been met).
[30]Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[31]A 5-Month Geometric Mean of the results of the 5 most recent samples

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-2
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Metals (Total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-2
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Organic Compounds					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Benzo (a) pyrene	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.05	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[32]	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

[32] Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

PHASE III (for flows 6.0 MGD or less)
WRF Site

TABLE IA-3
ROUTINE DISCHARGE MONITORING[33]

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1	Effluent Discharge Point			32° 59' 54.5"N	112° 3' 58.1" W
Parameter	**AL[34]**	**DL[35]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Flow to Reuse: Daily	N.E.[36]	N.E.	MGD[37]	Daily[38]	Quarterly
Flow to Reuse: Monthly Average	5.7	6.0	MGD	Monthly[39]	Quarterly
Flow to Recharge: Daily	N.E.	N.E.	MGD	Daily	Quarterly
Flow to Recharge: Monthly Average	5.7	6.0	MGD	Monthly	Quarterly
Total Flow: Daily[40]	N.E.	N.E.	MGD	Daily	Quarterly
Total Flow: Average Monthly	5.7	6.0	MGD	Monthly	Quarterly
Fecal Coliform: Single sample maximum	N.E.	23	CFU or MPN[41]	Daily[42]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[43]	N.E.	Non-detect[44]	CFU or MPN	Daily	Quarterly
Total Nitrogen[45]: 5-sample rolling geometric mean	8.0	10.0	mg/l	Monthly[46]	Quarterly

[33]Monitoring under Table IA-3 is no longer required upon commencement of operation under Phase IV.
[34]AL = Alert Level
[35]DL = Discharge Limit
[36]N.E. = Not established = Monitoring required but no limits have been specified at time of permit issuance.
[37]MGD = Million Gallons per Day
[38]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[39]Monthly = Monthly average of daily flow values (calculated value)
[40]Total Flow is the sum of flows to Reuse and Recharge Sites
[41]CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[42]**Daily** means at least four (4) samples per week must be analyzed.
[43]**Week** means a seven-day period starting on Sunday and ending on the following Saturday.
[44]If at least four (4) of the daily samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the daily samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has **not** been met).
[45]Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[46]A 5-Month Geometric Mean of the results of the 5 most recent samples

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-3
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (As free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-3
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Organic Compounds					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Benzo (a) pyrene	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.05	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[47]	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

[47]Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

PHASE IV (for flows 9.0 MGD or less)
WRF Site

TABLE IA-4
ROUTINE DISCHARGE MONITORING

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1	Effluent Discharge Point			32° 59' 54.5"N	112° 3' 58.1" W
Parameter	**AL[48]**	**DL[49]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Flow to Reuse: Daily	N.E.[50]	N.E.	MGD[51]	Daily[52]	Quarterly
Flow to Reuse: Monthly Average	8.55	9.0	MGD	Monthly[53]	Quarterly
Flow to Recharge: Daily	N.E.	N.E.	MGD	Daily	Quarterly
Flow to Recharge: Monthly Average	8.55	9.0	MGD	Monthly	Quarterly
Total Flow: Daily[54]	N.E.	N.E.	MGD	Daily	Quarterly
Total Flow: Average Monthly	8.55	9.0	MGD	Monthly	Quarterly
Fecal Coliform: Single sample maximum	N.E.	23	CFU or MPN[55]	Daily[56]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[57]	N.E.	Non-detect[58]	CFU or MPN	Daily	Quarterly
Total Nitrogen[59]: 5-sample rolling geometric mean	8.0	10.0	mg/l	Monthly[60]	Quarterly

[48]AL = Alert Level
[49]DL = Discharge Limit
[50]N.E. = Not established = Monitoring required but no limits have been specified at time of permit issuance.
[51]MGD = Million Gallons per Day
[52]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[53]Monthly = Monthly average of daily flow values (calculated value)
[54]Total Flow is the sum of flows to Reuse and Recharge Sites
[55]CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[56]**Daily** means at least four (4) samples per week must be analyzed.
[57]**Week** means a seven-day period starting on Sunday and ending on the following Saturday.
[58]If at least four (4) of the daily samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the daily samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has **not** been met).
[59]Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[60]A 5-Month Geometric Mean of the results of the 5 most recent samples

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-4
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (As free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-4
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Organic Compounds					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Benzo (a) pyrene	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.05	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[61]	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

[61]Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA-5
RECHARGE FLOW MONITORING

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1	Effluent Discharge Point (WRF Site)			32° 59' 54.5"N	112° 3' 58.1" W
Parameter	**AL[62]**	**DL[63]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Recharge Flow: Daily[64]	N.E.[65]	N.E.	MGD[66]	Daily[67]	Quarterly
Total Recharge Flow: Monthly Average	1.9	2.0[68]	MGD	Monthly[69]	Quarterly
Sampling Point Number	**Sampling Point Identification**			**Latitude**	**Longitude**
2	Inflow to WDC Site			32° 56' 31"N	112° 6' 00" W
Parameter	**AL**	**DL**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Recharge Flow: Daily	N.E.	N.E.	MGD	Daily	Quarterly
Total Recharge Flow: Monthly Average	8.55	9.0	MGD	Monthly	Quarterly

[62]AL = Alert Level
[63]DL = Discharge Limit
[64]Total Recharge Flow is the sum of flow directed to all recharge wells.
[65]N.E. = Not established = Monitoring required but no limits have been specified at time of permit issuance.
[66]MGD = Million Gallons per Day
[67]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[68]Discharge Limits for recharge represent the maximum disposal capacity documented in the permit application. Recharge flow shall not exceed the limits established in Tables IA-1 through IA-4.
[69]Monthly = Monthly average of daily flow values (calculated value)

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IB
RECLAIMED WATER MONITORING TABLE - CLASS A+[70]

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
1	Effluent Discharge Point		32° 59' 54.5"N	112° 3' 58.1" W
Parameter	**DL**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Fecal Coliform: Single-sample maximum	23	CFU or MPN[71]	Daily[72]	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	Non-detect[73]	CFU or MPN	Daily	Quarterly
Turbidity[74]: Single reading	5.0	NTU[75]	Everyday[76]	Quarterly
Turbidity: 24-hour average	2.0	NTU	Everyday	Quarterly

[70] Reclaimed water monitoring is in addition to routine discharge monitoring.
[71] CFU = Colony Forming Units per 100 ml: MPN = Most Probable Number per 100 ml.
[72] For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each calendar week are obtained and analyzed.
[73] If at least four (4) of the last seven (7) samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the last seven (7) samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has **not** been met).
[74] Turbidimeter shall have a signal averaging time not exceeding 120 seconds. Occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.
[75] Nephelometric Turbidity Units
[76] For the single turbidity reading, "everyday" means the maximum reading during the 24-hour period.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IIA[77]
AMBIENT GROUNDWATER MONITORING

Sampling Point Number	Sampling Point Identification	Latitude		Longitude	
3	POC #1 (WRF-MW-1) (55-902898)	32° 59' 47.3" N		112° 04' 03.9" W	
Sampling Point Number	**Sampling Point Identification**	**Latitude**		**Longitude**	
4	POC #2 (WDC-MW-1) (55-904018)	32° 56' 30.2" N		112° 06' 06.0" W	
Parameter	**AL[78]**	**AQL[79]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Nitrogen[80]	N.E.[81]	N.E.	mg/l	Monthly	Quarterly
Nitrate-Nitrite as N	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Coliform	N.E.	Absence[82]	CFU or MPN[83]	Monthly	Quarterly
Depth to Groundwater	N.E.	N.E.	Feet	Monthly	Quarterly
Metals (Total):					
Antimony	N.E.	N.E.	mg/l	Quarterly	Quarterly
Arsenic	N.E.	N.E.	mg/l	Quarterly	Quarterly
Barium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Beryllium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Cadmium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Chromium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	N.E.	N.E.	mg/l	Quarterly	Quarterly
Fluoride	N.E.	N.E.	mg/l	Quarterly	Quarterly
Lead	N.E.	N.E.	mg/l	Quarterly	Quarterly
Mercury	N.E.	N.E.	mg/l	Quarterly	Quarterly
Nickel	N.E.	N.E.	mg/l	Quarterly	Quarterly
Selenium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Thallium	N.E.	N.E.	mg/l	Quarterly	Quarterly

[77]The permittee shall conduct eight (8) monthly rounds of ambient groundwater quality sampling. Sampling under Table IIA may be discontinued after sampling under Table IIB begins.
[78]AL = Alert Level
[79]AQL = Aquifer Quality Limit
[80]Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.
[81]N.E. = Not Established = Monitoring required, but no limits have been established at this time.
[82]A positive result for total coliform may be verified with an analysis for fecal coliform. A positive result for fecal coliform shall be considered an exceedance of the AQL for total coliform.
[83]CFU = Colony Forming Units per 100 ml, MPN = Most Probable Number per 100 ml.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IIA
AMBIENT GROUNDWATER
MONITORING (continued)

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Organic Compounds					
Benzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Benzo-(a)-pyrene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Di (2-ethylhexyl) adipate	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Di (2-ethylhexyl) phthalate	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Pentachlorophenol	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Styrene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Toluene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[84]	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually

[84]Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IIA
AMBIENT GROUNDWATER
MONITORING (continued)

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Indicator Parameters:					
pH	N.E.	N.E.	pH	Monthly	Quarterly
Iron	N.E.	N.E.	mg/l	Monthly	Quarterly
Manganese	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Organic Carbon (TOC)	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Dissolved Solids (TDS)	N.E.	N.E.	mg/l	Monthly	Quarterly
Specific Conductance (field)	N.E.	N.E.	mg/l	Monthly	Quarterly
Calcium	N.E.	N.E.	mg/l	Monthly	Quarterly
Carbonate	N.E.	N.E.	mg/l	Monthly	Quarterly
Bicarbonate	N.E.	N.E.	mg/l	Monthly	Quarterly
Chloride	N.E.	N.E.	mg/l	Monthly	Quarterly
Magnesium	N.E.	N.E.	mg/l	Monthly	Quarterly
Potassium	N.E.	N.E.	mg/l	Monthly	Quarterly
Sodium	N.E.	N.E.	mg/l	Monthly	Quarterly
Sulfate	N.E.	N.E.	mg/l	Monthly	Quarterly
Herbicides & Pesticides:					
1,2-Dibromo-3-Chloropropane (DBCP)	N.E.	N.E.	mg/l	Monthly	Quarterly
Ethylene Dibromide (EDB)	N.E.	N.E.	mg/l	Monthly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IIB[85]
ROUTINE GROUNDWATER MONITORING

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
3	POC #1 (WRF-MW-1) (55-902898)		32° 59' 47.3" N		112° 04' 03.9" W
Sampling Point Number	**Sampling Point Identification**		**Latitude**		**Longitude**
4	POC #2 (WDC-MW-1) (55-904018)		32° 56' 30.2" N		112° 06' 06.0" W
Parameter	**AL[86]**	**AQL[87]**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Nitrogen[88]	N.E.[89]	N.E.	mg/l	Monthly	Quarterly
Nitrate-Nitrite as N	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Coliform	N.E.	Absence[90]	CFU or MPN[91]	Monthly	Quarterly
Depth to Groundwater	N.E.	N.E.	Feet	Monthly	Quarterly
Metals (Total):					
Antimony	N.E.	N.E.	mg/l	Quarterly	Quarterly
Arsenic	N.E.	N.E.	mg/l	Quarterly	Quarterly
Barium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Beryllium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Cadmium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Chromium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	N.E.	N.E.	mg/l	Quarterly	Quarterly
Fluoride	N.E.	N.E.	mg/l	Quarterly	Quarterly
Lead	N.E.	N.E.	mg/l	Quarterly	Quarterly
Mercury	N.E.	N.E.	mg/l	Quarterly	Quarterly
Nickel	N.E.	N.E.	mg/l	Quarterly	Quarterly
Selenium	N.E.	N.E.	mg/l	Quarterly	Quarterly
Thallium	N.E.	N.E.	mg/l	Quarterly	Quarterly

[85]The first samples collected under Table IIB shall be collected within 30 days after the last samples collected under Table IIA.
[86]AL = Alert Level
[87]AQL = Aquifer Quality Limit
[88]Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.
[89]N.E. = Not Established = Monitoring required, but no limits have been established at this time.
[90]A positive result for total coliform may be verified with an analysis for fecal coliform. A positive result for fecal coliform shall be considered an exceedance of the AQL for total coliform.
[91]CFU = Colony Forming Units per 100 ml, MPN = Most Probable Number per 100 ml.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IIB
ROUTINE GROUNDWATER
MONITORING (continued)

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Organic Compounds					
Benzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Benzo-(a)-pyrene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Di (2-ethylhexyl) adipate	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Di (2-ethylhexyl) phthalate	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Pentachlorophenol	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Styrene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Toluene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[92]	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	N.E.	N.E.	mg/l	Semi-Annually	Semi-Annually

[92]Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IIB
ROUTINE GROUNDWATER
MONITORING (continued)

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Indicator Parameters:					
pH	N.E.	N.E.	pH	Monthly	Quarterly
Iron	N.E.	N.E.	mg/l	Monthly	Quarterly
Manganese	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Organic Carbon (TOC)	N.E.	N.E.	mg/l	Monthly	Quarterly
Total Dissolved Solids (TDS)	N.E.	N.E.	mg/l	Monthly	Quarterly
Specific Conductance (field)	N.E.	N.E.	mg/l	Monthly	Quarterly
Calcium	N.E.	N.E.	mg/l	Monthly	Quarterly
Carbonate	N.E.	N.E.	mg/l	Monthly	Quarterly
Bicarbonate	N.E.	N.E.	mg/l	Monthly	Quarterly
Chloride	N.E.	N.E.	mg/l	Monthly	Quarterly
Magnesium	N.E.	N.E.	mg/l	Monthly	Quarterly
Potassium	N.E.	N.E.	mg/l	Monthly	Quarterly
Sodium	N.E.	N.E.	mg/l	Monthly	Quarterly
Sulfate	N.E.	N.E.	mg/l	Monthly	Quarterly
Herbicides & Pesticides:					
1,2-Dibromo-3-Chloropropane (DBCP)	N.E.	N.E.	mg/l	Monthly	Quarterly
Ethylene Dibromide (EDB)	N.E.	N.E.	mg/l	Monthly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE III
FACILITY INSPECTION (Operational Monitoring)

Pollution Control Structures/Parameter	Performance Levels	Inspection Frequency
Pump Integrity	Good working condition	Weekly
Treatment Plant Components	Good working condition	Weekly
Vadose-zone Wells	Good working condition No biofouling No clogging No daylighting	Monthly
Direct Injection Wells	Good working condition No biofouling No clogging No daylighting	Monthly
Fissure and Subsidence Inspection	No fissures No signs of subsidence	Monthly

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1.	APP Application dated:	September 6, 2005
2.	Contingency Plan, dated:	February 2, 2006
3.	Final Hydrologist Report dated:	October 11, 2006
4.	Final Engineering Report dated:	July 17, 2006
5.	Public Notice dated:	October 16, 2006
6.	Public Hearing, dated:	N/A
7.	Responsiveness Summary, dated:	N/A

6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons per day as established by A.R.S. § 49-242(D).

6.2 Duty to Comply [A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an Aquifer Water Quality Standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an Aquifer Water Quality Standard for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. the filing of bankruptcy by the permittee;

2. the entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.7 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8 Inspection and Entry [A.R.S. §§ 49-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension, and Revocation [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Other Information [A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2 Severability [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3 Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

ADEQ Arizona Department of Environmental Quality

Fact Sheet

Aquifer Protection Permit 105668
Place ID #108126, LTF # 37531
Palo Verde Utilities Company – Campus 2
Water Reclamation Facility

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an aquifer protection permit for the subject facility that covers the life of the facility, including operational, closure, and post closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance; and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

Permittee's Name:	Palo Verde Utilities Company, L.L.C.
Mailing Address:	21410 N 19th Ave., Suite 201 Phoenix, Arizona 85027
Facility Names and Locations:	Palo Verde Utilities Company – Campus 2 Water Reclamation Facility (WRF) (WRF and Recharge Site) Southwest corner of Peters & Nall Road and Green Road Global Water – Terrazzo Water Distribution Center (WDC) (Recharge Site) Northwest corner of White Road and Louis Johnson Drive Maricopa, Arizona

Regulatory Status

The facility submitted an application for an Individual APP on September 2, 2005. This is a new facility consisting of a WRF and an adjacent recharge facility located at one site, as well as a second recharge facility located approximately 5 miles southwest of the WRF site. There are no known compliance issues or violations.

Facility Description

The Palo Verde Utilities Company – Campus 2 Water Reclamation Facility (WRF) is a wastewater treatment facility capable of treating 13 million gallons per day (MGD) of effluent at build-out. The WRF will be constructed in five phases, as follows:

Phase	Expected Year of Completion	# of Dwelling Units	Total Estimated Population	Treatment Capacity (MGD)
I	2007	4,500	11,250	1.0
II	2009	13,500	33,750	3.0
III	2011	27,000	67,500	6.0
IV	2013	41,000	102,500	9.0
V	2026	66,000	165,000	13.0

At this time, only Phases I through IV are permitted in this permit.

The WRF will employ secondary treatment, tertiary filtration, nitrogen removal, filtration, and UV disinfection to treat domestic wastewater. The primary method of disposal for effluent is reuse. Recharge, via vadose zone recharge wells and aquifer injection recharge wells, will be used as a back-up to accommodate seasonal variations in reuse demand.

The effluent will be recharged at two sites connected via pipeline. The first recharge site is adjacent to the WRF. The second recharge site is located at the Global Water – Terrazzo Water Distribution Center (groundwater storage and water distribution facility) located approximately five miles south-southwest of the WRF.

All the sludge including screenings, grit, and scum, will be hauled off-site for disposal in accordance with State and Federal regulations.

In addition to the APP conditions pertaining to treatment and disposal of sewage sludge, the permittee must also comply with the requirements for sewage sludge disposal in 40 Code of Federal Regulations (CFR) Part 503 and 18 A.A.C. Ch. 9, Art. 10.

Upon completion of all phases of construction, the permittee may submit an application for a permit amendment to delete the monitoring tables that are no longer applicable.

Recharge capacities and discharging facilities for each site are tabulated below:

	Wastewater Reclamation Facility	Water Distribution Site
WRF Treatment Capacity (permitted)	9.0 MGD	not applicable
Recharge Methods	vadose zone recharge wells	vadose zone recharge wells and aquifer injection recharge wells
Estimated # of wells	8 vadose zone recharge wells	23 vadose zone recharge wells; 7 aquifer injection recharge wells
Expected Recharge Rates	200 gallons per minute (gpm)	200 gpm via vadose zone recharge wells; 350 gpm via aquifer injection recharge wells
Storm Water Retention Basins	1	2
Total Recharge Capacity (estimated)	2.0 MGD	9.0 MGD
Expected Recharge Activity (estimated)	up to 2.0 MGD	up to 6.0 MGD via vadose wells; up to 3.0 MGD via aquifer injection wells

The applicant has demonstrated the capacity to recharge up to 11.0 MGD but only expects to recharge 5.4 MGD when the plant is operating at 9.0 MGD. The applicant will also obtain appropriate underground storage facility (USF) permits from the Arizona Department of Water Resources (ADWR).

The facility contains three unlined storm water basins, one at the WRF site and two at the WDC site. Back-flushed groundwater, which may contain chlorine byproducts and coagulants, will also be pumped into these basins. Hence, the basins are considered part of the APP. The basins are listed below:

Pond Type	Latitude	Longitude	Operational Volume (ft^3)
WRF Site			
Storm water retention basin	32°59'55.0" N	112°04'00.0" W	140,466
WDC Site			
Storm water retention basin #1	32°56'25.1" N	112°06'07.2" W	31,410
Storm water retention basin #2	32°56'30.7" N	112°06'14.9" W	19,269

Listing of vadose zone (VZ) and aquifer injection (INJ) recharge well designs:

Well	Latitude	Longitude	ADWR Registration ID #	Well Diameter (inches)	Total Depth (feet)	Casing Depth (feet)	Perforated Interval (feet)	Casing Material
WRF Site								
C2VZ-1	32°59'59.40" N	112°04'03.94" W	TBD[1]	12"	100'	100'	60-100'	PVC
C2VZ-2	32°59'56.39" N	112°04'03.94" W	TBD	12"	100'	100'	60-100'	PVC
C2VZ-3	32°59'53.37" N	112°04'03.94" W	TBD	12"	100'	100'	60-100'	PVC
C2VZ-4	32°59'50.35" N	112°04'03.94" W	TBD	12"	100'	100'	60-100'	PVC
C2VZ-5	32°59'53.37" N	112°03'53.68" W	TBD	12"	100'	100'	60-100'	PVC
C2VZ-6	32°59'50.35" N	112°03'53.68" W	TBD	12"	100'	100'	60-100'	PVC
C2VZ-7	32°59'47.33" N	112°03'53.68" W	TBD	12"	100'	100'	60-100'	PVC
C2VZ-8	32°59'47.33" N	112°03'57.18" W	TBD	12"	100'	100'	60-100'	PVC
WDC Site								
TINJ-1	32°56'26.01" N	112°06'05.91" W	TBD	18"	750'	760'	540-750'	stainless steel
TINJ-2	32°56'27.20" N	112°06'09.14" W	TBD	18"	750'	760'	540-750'	stainless steel
TINJ-3	32°56'28.10" N	112°06'07.53" W	TBD	18"	750'	760'	540-750'	stainless steel
TINJ-4	32°56'28.81" N	112°06'11.54" W	TBD	18"	750'	760'	540-750'	stainless steel
TINJ-5	32°56'29.79" N	112°06'08.19" W	TBD	18"	750'	760'	540-750'	stainless steel
TINJ-6	32°56'30.00" N	112°06'14.13" W	TBD	18"	750'	760'	540-750'	stainless steel
TINJ-7	32°56'30.24" N	112°06'09.94" W	TBD	18"	750'	760'	540-750'	stainless steel
TVZ-1	32°56'24.54" N	112°06'05.89" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-2	32°56'29.15" N	112°06'05.89" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-3	32°56'25.79" N	112°06'05.88" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-4	32°56'29.70" N	112°06'10.69" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-5	32°56'25.43" N	112°06'07.17" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-6	32°56'30.04" N	112°06'05.88" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-7	32°56'26.25" N	112°06'08.04" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-8	32°56'30.41" N	112°06'15.43" W	TBD	12"	100'	100'	60-100'	PVC

[1] TBD = To Be Determined

Well	Latitude	Longitude	ADWR Registration ID #	Well Diameter (inches)	Total Depth (feet)	Casing Depth (feet)	Perforated Interval (feet)	Casing Material
TVZ-9	32°56'26.93" N	112°06'08.76" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-10	32°56'30.41" N	112°06'14.21" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-11	32°56'26.70" N	112°06'05.85" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-12	32°56'30.41" N	112°06'13.09" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-13	32°56'27.61" N	112°06'09.59" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-14	32°56'30.41" N	112°06'11.54" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-15	32°56'27.66" N	112°06'05.84" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-16	32°56'30.37" N	112°06'10.64" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-17	32°56'28.11" N	112°06'08.26" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-18	32°56'30.37" N	112°06'09.43" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-19	32°56'28.23" N	112°06'10.61" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-20	32°56'30.37" N	112°06'08.27" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-21	32°56'28.44" N	112°06'05.85" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-22	32°56'30.37" N	112°06'07.01" W	TBD	12"	100'	100'	60-100'	PVC
TVZ-23	32°56'28.88" N	112°06'11.55" W	TBD	12"	100'	100'	60-100'	PVC

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

All treatment units upstream of the filters will be covered with concrete or aluminum covers and air scrubbers will be provided for odor control. All pumps, blowers, and electrical equipment will be housed within buildings for noise control. The entire WRF site will be surrounded by a chain link fence and/or a masonry wall, for aesthetic control. The WRF meets the required setback of 350 feet.

The WRF is designed to meet all the treatment performance criteria for new facilities as specified in Arizona Administrative Code R18-9-B204. The WRF will produce reclaimed water meeting Class A+ Reclaimed Water Standards (A.A.C. R18-11, Article 3) that may be delivered for use under a valid reclaimed water permit under A.A.C. R18-9 Article 7.

The facility shall meet the requirements for pretreatment by conducting monitoring as per R18-9-B204(B)(6)(b)(iii).

The size, number, operation, site specific data, and infiltration rates of the aquifer injection recharge wells and vadose zone recharge wells are listed below.

WRF Site: Site specific conditions including aquifer thickness (500 feet), transmissivity (43,000 gpd/ft), depth to groundwater prior to recharge (~130 feet bls), depth to groundwater after 20-years of recharge (~50 feet bls), and vadose material (mixture of silt and sand with gravel and minor clay) were used to estimate that approximately 8 vadose zone recharge wells may be needed to infiltrate a maximum recharge capacity of 2.0 MGD of effluent into the subsurface.

WDC Site: Site specific conditions including aquifer thickness (500 feet), transmissivity (22,441 gpd/ft), depth to groundwater prior to recharge (~550 feet bls), depth to groundwater after 20-years of recharge (~60 feet bls), and vadose material (mixture of clay, sand and gravel) were used to estimate that approximately 7 aquifer injection recharge wells and 23 vadose zone recharge wells may be needed to infiltrate a maximum recharge capacity of 9.0 MGD of effluent into the subsurface.

III. HYDROGEOLOGIC SETTING

HydroSystems, Inc. prepared the hydrogeologic report for the APP application with the assistance of Palo Verde Utilities Company and its parent company, Global Water Resources. The hydrogeologic report identified the requirements listed in A.A.C. R18-9-A202(A)(8).

The project area, which includes the WRF and the WDC, is located in the northern portion of the Maricopa-Stanfield alluvial basin within the Basin and Range Physiographic Province. The Basin and Range Physiographic Province is defined by uplifted blocks or mountain ranges with intervening alluvial basins or valleys, created by extensional (pull apart) faulting. The elongated basins and ranges typically trend northwest-southeast and parallel one another and are separated by numerous mountain ranges. The mountains surrounding the basin are composed predominantly of Precambrian schist and granite and include the South, Santan, Sacaton, and Palo Verde Mountains. The alluvial basins are typically composed of alluvium that is over 4800 feet thick in the center of the basin; derived from the surrounding mountains. The alluvium is separated into three alluvial units (Upper Alluvial Unit (UAU), Middle Silt and Clay Unit (MSCU), and Lower Conglomerate Unit (LCU)) based on the percentage of clays, sands, gravels, and cementation.

There is on-going subsidence due to historic groundwater depletion for agricultural irrigation. Subsidence rates decreased in 1987 when the use of surface water derived from the Colorado River (Central Arizona Project (CAP) Water) reduced groundwater withdrawals. Maximum subsidence is close to 12 feet with subsidence

rates ranging from 0.032 to 0.22 ft per year since 1987. Fissures are present about one mile east and 1.5 miles south the of WDC site.

The Maricopa-Stanfield groundwater basin is one of the five groundwater basins comprising the Pinal Active Management Area (AMA) in the Santa Cruz/ Rio Magdalena/ Rio Sonoita watershed. In general, two regional aquifers (Upper and Lower Aquifers), corresponding to the Upper Alluvial Unit (UAU) and the Lower Conglomerate Unit (LCU), are present in the basin. Perched zones may also be present throughout the alluvial units especially within the Middle Silt and Clay Unit (MSCU) which is generally an aquitard when present.

In general, groundwater flows from northeast to southwest within both aquifers although the localized flow direction may be strongly affected by two large hydrologic sinks created by agricultural pumping.

WRF Site

The water table for the Upper Aquifer is present at about 130 feet below the land surface (bls). Groundwater flow directions in this area are strongly affected by a pumping depression located in T6S, R2E, Sections 1 and 12, 4.5 miles south-southwest of the site. No wells registered with ADWR exist within 0.5 miles of the WRF. The nearest domestic use well is located approximately one mile southeast of the site.

WDC Site

The Upper Aquifer does not appear to be present at the WDC at this time; however, it may have been present prior to extensive dewatering of the aquifer for agricultural purposes. The static water level of the aquifer at this site is about 550 feet bls. Groundwater flow directions are strongly affected by a pumping depression located in T6S, R2E, Sections 1 and 12, centered about 1.5 miles south of the site. Eighteen wells are located within 1 mile; 11 wells are used for irrigation; 4 wells for domestic water supply, 3 wells are either capped or not in use.

IV. STORM WATER AND SURFACE WATER CONSIDERATIONS

Storm water / surface water considerations included whether the facility was located within the 100-year flood plain and whether the discharge had the potential to impact nearby surface water drainages located downgradient of the WRF and WDC recharge facilities.

The facilities are located in the Lower Vekol Wash (HUC-10) sub-basin in the Santa Cruz surface water basin. Vekol Wash, located about 2.5 miles west of the WRF, is the primary watercourse in the project area. Vekol Wash is ephemeral; it flows northward in response to storm events only. Both the USGS and Maricopa Flood Control District have monitored surface water flow in Vekol Wash, just west of the

westbound bridge on Interstate 8 (~15 miles southwest of the WRF and ~12 miles southwest of the WDC). Vekol Wash merges with Santa Cruz Wash approximately 3 miles north of the WRF, just before Santa Cruz Wash confluences with the Gila River. Smaller, unnamed washes have been altered and disturbed in the project area due to extensive irrigation practices.

The Santa Rosa Canal (SRC) is a lined canal system operated by the Maricopa-Stanfield Irrigation District. Several lateral canals are located in the project area with the nearest lateral canal located approximately 0.5 miles south of the WRF. The lateral canal extends six miles to the south of the WRF, where is joins the main Santa Rosa Canal, which runs southeast to northwest, terminating in T5S, R2E, Sec 17, on land owned by the Ak Chin Indian Community.

The WRF and WDC are not located in a 100-year flood plain.

Monitoring of nearby drainages was not included as a permit condition because the facilities do not discharge to any surface water.

V. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

The permittee is required to show that pollutants discharged will not cause or contribute to a violation of aquifer water quality standards at the points of compliance (POCs). The locations of the points of compliance (POCs) which show compliance with aquifer water quality standards is determined by an analysis of the pollutant management area (PMA), the discharge impact area (DIA), and locations and uses of groundwater wells in the area. The POC locations are selected to protect off-site uses of groundwater, to verify BADCT performance, and to allow early detection of potential impact from the WRF and WDC discharges.

The PMA is described in A.R.S. §49-244 as the limit projected in the horizontal plane of the area on which pollutants are or will be placed. The PMA includes horizontal space taken up by any liner, dike or other barrier designed to contain pollutants in the facility. If the facility contains more than one discharging activity, the PMA is described by an imaginary line circumscribing the several discharging activities. The PMAs for the permitted facilities are as follows:

WRF Site

The PMA is defined by a line circumscribing all components of the WRF, the overflow basin, recharge wells, and related piping.

WDC Site

The PMA is defined by a line circumscribing all recharge wells, overflow basins, and related tanks and piping.

The DIA is defined by ARS §49-201.13. The DIA means the potential areal extent of pollutant migration, as projected on the land surface, as the result of a discharge from a facility. Two separate DIAs have been designated for the permitted facilities as follows:

WRF Site

The average ground water flow velocity equation was used to estimate the distance a particle would travel over a 20-year time frame. This equation indicated that a particle would travel 1986 feet away from the facility if continuous recharge of 2.0 million gallons of effluent were to occur.

The Area of Impact Analysis (AOI) was used to estimate the maximum increase in water levels if recharge were to occur continuously at the maximum recharge capacity for this site without recovery. The AOI measures only the changes in water levels due to the recharge with the extent generally defined by a rise in the water table of one foot or more. Changes in water level may or may not be similar to the distance a particle [of a pollutant] may travel depending on site conditions. The AOI would extend approximately 9 miles radially from the site on the east, north and south sides, but is not expected to extend more than 2 miles on the west due to mountainous terrain. The maximum rise in water level after continuous recharge is estimated to be about 81 feet, raising the water table to about 50 feet bls.

WDC Site

The average ground water flow velocity equation was used to estimate the distance a particle would travel over a 20-year time frame. This equation indicated that a particle would travel 5277 feet away from the facility if continuous recharge of 9.0 million gallons of effluent were to occur.

The Area of Impact Analysis (AOI) was used to estimate the maximum increase in water levels if recharge were to occur continuously at the maximum recharge capacity for this site without recovery. The AOI measures only the changes in water levels due to the recharge with the extent generally defined by a rise in the water table of one foot or more. Changes in water level may or may not be similar to the distance a particle [of a pollutant] may travel depending on site conditions. The AOI is estimated to extend ~6 miles to the east, 2 miles to the west, and 7 miles to the north and south. The estimated AOI is conservatively large due to its location upgradient of a significant pumping depression. The maximum rise in water level after continuous recharge is estimated to be about 490 feet, raising the water table to about 60 feet bls.

Monitoring and Reporting Requirements

To ensure that site operations do not have a negative impact on groundwater quality, discharge monitoring will be required for fecal coliform, total nitrogen, metals, and VOCs, as described in the permit.

Discharge monitoring during Phases I through IV of construction will be conducted under Tables IA-1 through IA-4. The facility will only monitor under the appropriate Tables commensurate with phases already constructed. Upon construction of each phase, the facility will discontinue monitoring required in the previous phase(s).

Treated effluent recharged to groundwater will be monitored under Table IA-5. The production of Class A+ Reclaimed Water will be monitored under Table IB. Ambient groundwater monitoring will be conducted under Table IIA. After eight (8) monthly rounds of ambient groundwater monitoring have been completed, routine groundwater monitoring will be conducted under Table IIB.

Groundwater monitoring will be conducted at the WRF site and at the WDC site. All AQLs and ALs are initially set at "Not Established" because ambient groundwater quality has not been determined. In general, both aquifers are degraded by agricultural irrigation. The lower aquifer is also naturally degraded by arsenic and fluoride. The ALs and AQLs will be set once the ambient groundwater monitoring has been completed and a permit amendment has been submitted as per Section 3.0.

WRF Site

Water quality data from one sample collected at WRF-MW-1 indicated nitrate (16 mg/l) and selenium (0.056 mg/l) present above the applicable AWQS, fluoride (3.8 mg/l) close to the AWQS, and very high TDS (5500 mg/l). Additional samples will be collected to determine existing groundwater quality.

WDC Site

Water quality data from one sample collected at WDC-MW-1 indicated total Kjehdahl nitrogen present at 1.7 mg/l but did not analyze for nitrate or nitrite. Additional samples will be collected to determine existing groundwater quality.

The permittee shall also inspect the facility for fissures or signs of subsidence that may impact the on-site facilities. Visual inspections shall be performed by personnel trained in identification of surficial features of earth fissures and subsidence. Inspections shall be made in the buffer zone surrounding the wastewater recharge sites to a distance of 300 feet from the recharge sites, where practicable. Earth fissure monitoring is required monthly. If the surficial features that could indicate the presence of earth fissures are observed, the observations will be confirmed by a third party professional engineer or geologist. If the third party inspection confirms the possibility that the surficial features indicate a fissure, the features will be documented with sketches, maps and photographs as appropriate, indicating the

nature of the feature, dimensions, and orientation. Documentation will also include any incremental changes in a feature previously documented. All this information shall be submitted in a report to the ADEQ, within 60 days of the confirmation of the presence of fissures. The report shall consist of observations and interpretations concerning the potential effects of pollutant contamination on the environment and public health.

Point(s) of Compliance (POC)

Three hazardous / non-hazardous POCs have been designated as follows:

POC Number	POC Name	Descriptive Location	Latitude	Longitude
1	WRF-MW-1 (ADWR No. 55-902898)	Well installed at the southwest corner of the WRF site	32°59'47.3" N	112°04'03.94" W
2	WDC-MW-1 (ADWR No. 55-904018)	Well installed at the northeast corner of the WDC site	32°56'30.2" N	112°06'05.98" W
3	WDC-MW-2	Conceptual location near the southeast corner of the WDC site	32°56'29.9" N	112°06'08.3" W

WRF Site

Groundwater monitoring is required at POC #1. This well is downgradient of the WRF and the adjacent recharge site. WRF-MW-1 is a 4-inch diameter PVC cased well completed to a depth of 200 feet and screened from 67 feet to 186 feet bls.

WDC Site

Groundwater monitoring is required at POC #2. WDC-MW-1 is an existing 4-inch diameter PVC cased well completed to a depth of 610 feet and screened from 530 feet to 600 feet bls. Although it is currently upgradient of the recharge wells, it is within the DIA created by recharge from the facility, and it will be downgradient during recharge due to groundwater mounding. A monitor well is not required to be installed at POC #3 except as a contingency action. If a monitor well is required at POC #3 in the future, its design will be similar to that of WDC-MW-1.

The Director may designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

VI. COMPLIANCE SCHEDULE

Description	Deadline:
STATUS REPORTS	
The permittee shall submit an annual report describing the number and location of vadose zone recharge wells and/or aquifer injection recharge wells installed. The permittee shall also notify ADEQ before replacing or abandoning any wells.	Annual report to be submitted with the first quarter SMRFs.
GROUNDWATER MONITORING	
The permittee shall conduct eight (8) monthly rounds of ambient groundwater quality sampling for the parameters listed in Section 4.0, Table IIA.	Begin sampling within 30 days after issuance of the permit.
The permittee shall submit an Ambient Groundwater Monitoring Report, including a summary of the data collected during all eight (8) rounds of sampling. The Ambient Groundwater Monitoring Report shall include proposed ALs and AQLs for the monitoring wells. At the same time, the permittee shall also submit an application for a permit amendment to incorporate the ALs and AQLs into Table IIB.	Within one year after issuance of the permit.
The permittee shall begin sampling under Table IIB after completion of eight (8) monthly rounds of sampling under Table IIA. Sampling under Table IIA may be discontinued after sampling under Table IIB begins.	The first samples collected under Table IIB shall be collected within 30 days after the last samples collected under Table IIA.
SUBSURFACE RECHARGE	
The permittee shall recharge treated effluent in excess of reuse demand to the subsurface via aquifer injection recharge wells and vadose zone recharge wells.	Recharge operations shall not begin before eight (8) monthly rounds of ambient groundwater quality sampling have been completed.
PHASE II CONSTRUCTION (3.0 MGD)	
Begin construction of Phase II.	Notify ADEQ within 15 days of the commencement date of construction of Phase II.

Description	Deadline:
Submit an Engineer's certificate of completion for Phase II.	Within 30 days of completion of construction and prior to commencing discharge from the WRF under Phase II.
Notify ADEQ of commencement of discharge from the WRF for Phase II.	Within 15 days of commencement of discharge under Phase II.
PHASE III CONSTRUCTION (6.0 MGD)	
Begin construction of Phase III.	Notify ADEQ within 15 days of the commencement date of construction of Phase III.
Submit an Engineer's certificate of completion for phase III.	Within 30 days of completion of construction and prior to commencing discharge from the WRF under Phase III.
Notify ADEQ of commencement of discharge from the WRF for Phase III.	Within 15 days of commencement of discharge under Phase III.
PHASE IV CONSTRUCTION (9.0 MGD)	
Begin construction of Phase IV.	Notify ADEQ within 15 days of the commencement date of construction of Phase IV.
Submit an Engineer's certificate of completion for phase IV.	Within 30 days of completion of construction and prior to commencing discharge from the WRF under Phase IV.
Notify ADEQ of commencement of discharge from the WRF for Phase IV.	Within 15 days of commencement of discharge under Phase IV.

VII. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

Palo Verde Utilities Company, L.L.C. has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202(B).

The WRF was designed as per the design report prepared, stamped, and signed (sealed) by Mr. Richard J. Ryan, P.E. (Professional Engineer), Aqua Tec, Inc., dated January 13, 2006, and subsequent sealed submittals by Mr. Brian P. McBride, P.E., McBride Engineering Solutions, Inc., that served as additions to the design report. A certified operator will be retained for the operation and maintenance of the WRF.

ADEQ requires that appropriate documents be sealed by an Arizona registered geologist or professional engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

Palo Verde Utilities Company, L.L.C. has demonstrated the financial responsibility necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee is expected to maintain financial capability throughout the life of the facility.

The permittee submitted a closure cost estimate of $119,000.00. The permittee demonstrated financial capability through A.A.C. R18-9-A203 (B)(1) and (C)(5).

Zoning Requirements

Palo Verde Utilities Campus 2 WRF has been properly zoned for the permitted use and the permittee has complied with all Pinal County zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(A)(2)(c).

VIII. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-108(A))

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit will be public noticed in a local newspaper after a pre-notice review by the applicant and other affected agencies.

Public Comment Period (A.A.C. R18-9-109(A))

The aquifer protection program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-109(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

IX. ADDITIONAL INFORMATION

Additional information relating to this proposed permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Wastewater, Recharge & Reuse Unit
Attn: Bob Manley
1110 W. Washington St., Mail Code 5415B-3
Phoenix, Arizona 85007
Phone: (602) 771- 4498
Email: rm4@azdeq.gov